ABSTRACT

The invention provides a thermal transfer interface for dissipating heat from an object to a thermal spreader and/or heat sink. The spreader forms a plurality of passageways. A spring element couples with the spreader. A plurality of thermally conductive pins moves along the passageways, extending outwardly via the spring element for conformal and thermal contact with the object. Thermal energy transfers from the object to the spreader through the collective area defining the interface between the pins and the spreader. The spring element is preferably thermally conductive; and thermal grease added to the interface may beneficially decrease thermal resistances due to microscopic unevenness at the contact between the object and the pins and/or spring element. An additional heat sink may couple to the spreader to dissipate additional thermal energy.